Source Water Assessment Report

Public Water Supply: OSBORNE, CITY OF

Assessment Areas Include:
198, 199, 200

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Reports were generated with the Automated Source Water Assessment Tool (ASWAT). Assessments were completed online using ASWAT by hundreds of state employees, public water supply staff, and technical assistant providers throughout the State of Kansas.

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Report Description

Detailed Explanation of Entire Report:

The 1996 amendments to the Safe Drinking Water Act require each state to develop a Source Water Assessment Program (SWAP) and a Source Water Assessment (SWA) for each Public Water Supply (PWS) that treats and distributes raw source water. In Kansas there are 761 public water supplies that require SWAs. A SWA includes a delineation of the source water assessment area, an inventory of potential contaminant sources, and a susceptibility analysis.

A PWS can consist of one or more individual assessment areas that require different assessments. In general, an assessment area is delineated at a two−mile fixed radius for a groundwater well. A surface water intake assessment area is the upstream−drainage area (watershed), inside the state border. Additionally, an assessment area can consist of an individual well, group of wells, an individual surface water intake, or multiple surface water intakes.

After each assessment is completed a report is automatically generated using an Internet−based application called the Automated Source Water Assessment Tool (ASWAT). The individual assessment reports combine to form the entire SWA report for a PWS.

A map of each Assessment Area was also generated with ASWAT. However, for security reasons the maps are not included in this report. To obtain a copy of the map(s), please contact your local PWS.

All PWS reports will be available for viewing and downloading on KDHE's Watershed Management Section website(http://www.kdhe.state.ks.us/nps) in 2004.

OSBORNE, CITY OF Summary:

AA	Type	Diversion Id
198	Ground water multiple wells	003, 001, 004, 012, 016, 011, 010, 020, 021, 009, 019, 015, 014, 007, 013, 006, 018, 017, 008
199	Ground water single well	005
200	Surface water single intake	999

Public Water Supply:	**OSBORNE, CITY OF**
Assessment Area:	**198**
Diversion Id's:	**003, 001, 004, 012, 016, 011, 010, 020, 021, 009, 019, 015, 014, 007, 013, 006, 018, 017, 008**
Status:	**Accepted**
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Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication − phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi−quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **198**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score − SLS	57	52	58	60	56	59
SLS Range	Mid	Mid	Mid	Mid	Mid	Mid

A − Microbiolgical
B* − Nitrates
C* − Pesticides
B − Inorganic Compounds
C − Synthetic Organic Compounds
D − Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0−50	**Low Susceptibility**
51−80	**Moderate Susceptibility**
81−100	**High Susceptibility**

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Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a100−foot radius around a groundwater well and a 1000−foot radius around a surface water intake. Zone B is a 2000−foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2−mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **OSBORNE, CITY OF**
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Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
199431	Veterinary Services, Specialties	742	B
199317	Single−family Housing Construction	1521	B
199423	Newspapers Publishing and Printing	2711	B
199384	Local Trucking, without Storage	4212	B
199340	Refuse Systems	4953	B
199342	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	B
199390	Auto Truck Repair Service	7538	B
199455	Veterinary Services, Specialties	742	C
199366	Signs and Advertising Display Manufacturing	3993	C
199314	Local Trucking, without Storage	4212	C
199323	Local Trucking, without Storage	4212	C
199336	Farm Product Warehousing and Storage	4221	C
199338	Farm Product Warehousing and Storage	4221	C
199337	Refuse Systems	4953	C
199330	Farm and Garden Machinery	5083	C
199456	Farm and Garden Machinery	5083	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
199316	Gasoline Service Station	5541	C
199325	Gasoline Service Station	5541	C
199430	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
199365	Auto Truck Repair Service	7538	C
199444	Repair Services, Nec	7699	C
199348	Golf Course	7992	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2000428	Mans, Richard	A−SOOB−BA10	C

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3000487	Usd 392, Osborne	05963	B

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3000524	Osborne Co Mem Hospital	06232	B
3000813	Osborne Airport	08418	C
3001300	Hardman Lumber Co	23404	C
3001509	Megaffin, Scott	25690	C
3001616	Osborne Power Plant, Osborne	26151	C
3001744	Kdot, Osborne	26676	C
3002333	The Huddle	29713	C
3002587	Osborne City Airport	80446	C
3002588	Krier, Leo	80447	C
3002642	Swank Standley Storage	81155	C
3002654	Vacant Lot, Osborne	81192	C

Regulated Identified Contaminated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Solid Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6000214	OSBORNE COUNTY HIGHWAY DEPARTMENT	I−SO29−PO02	C

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6001807	OSBORNE WWTP	M−SO29−OO02	C

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Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **OSBORNE, CITY OF**
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Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9001176	grove of trees	0	B
9001174	cropland	111	B
9001175	cropland	115	B

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Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number or sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **OSBORNE, CITY OF**
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Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
6	3	17	4	15	4

A − Microbiolgical
B* − Nitrates
C* − Pesticides
B − Inorganic Compounds
C − Synthetic Organic Compounds
D − Volatile Organic Compounds

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Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A − Microbiolgical **B** − Inorganic Compounds **B1** − Eutrophication − Phosphorous
B2 − Sedimentation **B*** − Nitrates **C** − Synthetic Organic Compounds
C* − Pesticides **D** − Volatile Organic Compounds

Potential Contaminants Listing

Public Water Supply: **OSBORNE, CITY OF**
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Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
7538	Auto Truck Repair Service	Inorganics, VOCs	B
"	"	"	D
5541	Gasoline Service Station	Inorganics, VOCs	B
"	"	"	D
7992	Golf Course	Fertilizers and pesticides	A
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
4212	Local Trucking, without Storage	VOCs	D
3993	Signs and Advertising Display Manufacturing	inorganics, VOCs	B
"	"	"	D
1521	Single−family Housing Construction	Oil, Paint, Pesticides, Fertilizers	A
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	B
"	"	"	D
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	A
"	"	"	B
4221	Farm Product Warehousing and Storage	TSS, VOCs	B
"	"	"	D
5083	Farm and Garden Machinery	inorganics	B
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
4953	Refuse Systems	ALL	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C
"	"	"	C*
"	"	"	D
7699	Repair Services, Nec	inorganics	B

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Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **198**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7538	Auto Truck Repair Service	Inorganics, VOCs	Discharge to POTW. Manage oil products and used oil so that it is not in contact with water	40 CFR 442 and
5541	Gasoline Service Station	Inorganics, VOCs	Maintain area to minimize fuel contamination	NA
7992	Golf Course	Fertilizers and pesticides	Proper application of fertilizers and pesticides. Proper cleaning of equipment and disposal of chemicals.	KDHE, KAR 28−16
4212	Local Trucking, without Storage	VOCs	Discharge to a POTW	State or federal Storm water pollution prevention regulations
3993	Signs and Advertising Display Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 459 and State or federal Storm water pollution prevention regulations
1521	Single−family Housing Construction	Oil, Paint, Pesticides, Fertilizers	Proper cleaning and disposal of household hazardous waste. Proper storage, application, and clean up of pesticides and fertilizers	KAR 28−48, KDHE, KDEM

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	Discharge to POTW. Recycle where appropriate. Properly maintain oil product and waste. Manage paint and solvent wastes properly	NA
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	Discharge to POT	NA
4221	Farm Product Warehousing and Storage	TSS, VOCs	Keep the area clean of grain. Use grease traps.	State or federal Storm water pollution prevention regulations
5083	Farm and Garden Machinery	inorganics	Discharge to POTW	NA
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
4953	Refuse Systems	ALL	Store wastes properly in order to minimize contact with storm water.	Maintain the lagoon or storage vessel properly. Control storm water run on and runoff to minimize contamination of storm water

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7699	Repair Services, Nec	inorganics	Discharge to POTW	NA

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Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **198**

Ground Water Multiple Wells Analysis

A − Microbiolgical **B** − Inorganic Compounds
B* − Nitrates **C** − Synthetic Organic Compounds
C* − Pesticides **D** − Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is any well under the influence of surface water?	No	0	0	0	0	0	0
2	Do all PWS wells meet KS PWS water well construction standards?	Yes	0	0	0	0	0	0
3	Is any well less than 30 feet deep?	No	0	0	0	0	0	0
4	Is gravel pack within 20 feet of any well surface?	No	0	0	0	0	0	0
5	Does a PWS own or control all the areas around the wells?	Yes	0	0	0	0	0	0
6	Does Zone B consist entirely of native grass?	No	2	2	2	2	2	2
7	Is there a contaminated well in Zone B?	No	0	0	0	0	0	0
8	Is a class V UIC well present?	No	0	0	0	0	0	0
9	Are any commercial, industrial, or urban areas present in Zone B?	Yes	1	1	1	1	1	1
10	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
11	Are any non−farm home sites present in Zone B?	Yes	1	0	1	0	1	0
12	Do all the non−farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
13	Are any farmsteads present in Zone B?	No	0	0	0	0	0	0
14	Do all farmsteads have a water quality protection plan?	Yes	0	0	0	0	0	0
15	Is there grazing livestock in Zone B?	Yes	1	0	1	0	0	0
16	Have all livestock producers implemented water quality protection measures?	No	1	0	1	0	0	0
17	Is there livestock confinement in Zone B?	No	0	0	0	0	0	0

No.	Question	Response	A	B	B*	C	C*	D
18	Is each confined animal feeding operation registered with KDHE?	Yes	0	0	0	0	0	0
19	Is there corn or grain sorghum production in Zone B?	Yes	0	0	1	0	1	0
20	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
21	Are any orchards present in Zone B?	No	0	0	0	0	0	0
22	Are orchard nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
23	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	No	0	0	0	0	0	0
24	Is there a railroad or major highway in Zone B or C?	Yes	0	1	1	1	1	1
25	Is there oil production in Zone B or C?	Yes	0	1	0	1	0	1
26	Do coarse textured soils predominate Zones A, B and C?	Yes	1	1	1	1	1	1
27	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
28	Is a wastewater treatment facility in Zone B or C?	Yes	1	1	1	1	1	1
29	Is a solid waste landfill in Zone B or C?	No	0	0	0	0	0	0
30	Are there unplugged, abandoned water wells present in Zone C?	Yes	2	1	1	1	1	1
31	Are any commercial, industrial, or urban area present in Zone C?	Yes	1	1	1	1	1	1
32	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
33	Is there livestock confinement in Zone C?	Yes	1	1	1	1	1	0
34	Is each confined livestock facility registered with KDHE?	Yes	0	0	0	0	0	0
35	Do all the livestock producers have water quality protection measures in place?	No	1	0	1	0	0	0
36	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
37	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
38	Does a perennial stream flow into Zone C?	Yes	1	1	1	1	1	1
39	Are watershed water quality protection plans in place?	No	1	1	1	1	1	1

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Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **198**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Mans, Richard	2000428	This cattle livestock facility has no water quality protection plans.	Nicole Fisher

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Kdot, Osborne	3001744	The site is closed from a 1990 gasoline spill. Groundwater contamination is unknown.	Nicole Fisher

Comments for Regulated Leaking Storage Tank Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Osborne Co Mem Hospital	3000524	The site is closed from a diesel spill in 1990. Groundwater contamination is unknown.	Nicole Fisher

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

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Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **198**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
cropland	9001174	This site could contaminate the public water supply.	Nicole Fisher
cropland	9001175	This site could contaminate the public water supply.	Nicole Fisher
grove of trees	9001176	This is an important buffer to prevent contamination into the public water supply.	Nicole Fisher

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Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **198**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		

Public Water Supply:	**OSBORNE, CITY OF**
Assessment Area:	**199**
Diversion Id's:	**005**
Status:	**Accepted**
Submit Date:	**2003−01−29 15:23:33**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication − phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi−quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **199**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score − SLS	41	45	45	52	51	55
SLS Range	Low	Low	Low	Mid	Low	Mid

A − Microbiolgical
B* − Nitrates
C* − Pesticides
B − Inorganic Compounds
C − Synthetic Organic Compounds
D − Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0−50	**Low Susceptibility**
51−80	**Moderate Susceptibility**
81−100	**High Susceptibility**

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **199**
Diversion Id's: **005**
Status: **Accepted**
Submit Date: **2003−01−29 15:23:33**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a100−foot radius around a groundwater well and a 1000−foot radius around a surface water intake. Zone B is a 2000−foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2−mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **199**

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
199314	Local Trucking, without Storage	4212	B
199316	Gasoline Service Station	5541	B
199325	Gasoline Service Station	5541	B
199431	Veterinary Services, Specialties	742	C
199455	Veterinary Services, Specialties	742	C
199317	Single−family Housing Construction	1521	C
199423	Newspapers Publishing and Printing	2711	C
199366	Signs and Advertising Display Manufacturing	3993	C
199323	Local Trucking, without Storage	4212	C
199384	Local Trucking, without Storage	4212	C
199336	Farm Product Warehousing and Storage	4221	C
199338	Farm Product Warehousing and Storage	4221	C
199337	Refuse Systems	4953	C
199340	Refuse Systems	4953	C
199342	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
199430	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
199365	Auto Truck Repair Service	7538	C
199390	Auto Truck Repair Service	7538	C
199444	Repair Services, Nec	7699	C
199348	Golf Course	7992	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3001744	Kdot, Osborne	26676	B
3000487	Usd 392, Osborne	05963	C
3000524	Osborne Co Mem Hospital	06232	C
3000813	Osborne Airport	08418	C

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3001300	Hardman Lumber Co	23404	C
3001509	Megaffin, Scott	25690	C
3001616	Osborne Power Plant, Osborne	26151	C
3002333	The Huddle	29713	C
3002587	Osborne City Airport	80446	C
3002642	Swank Standley Storage	81155	C
3002654	Vacant Lot, Osborne	81192	C

Regulated Identified Contaminated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Solid Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6000214	OSBORNE COUNTY HIGHWAY DEPARTMENT	I−SO29−PO02	C

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6001807	OSBORNE WWTP	M−SO29−OO02	C

Public Water Supply:	**OSBORNE, CITY OF**
Assessment Area:	**199**
Diversion Id's:	**005**
Status:	**Accepted**
Submit Date:	**2003−01−29 15:23:33**

Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **199**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9001176	grove of trees	0	B
9001174	cropland	111	B
9001175	cropland	115	B

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **199**
Diversion Id's: **005**
Status: **Accepted**
Submit Date: **2003−01−29 15:23:33**

Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number or sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **199**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
6	3	15	4	15	4

A − Microbiolgical
B* − Nitrates
C* − Pesticides
B − Inorganic Compounds
C − Synthetic Organic Compounds
D − Volatile Organic Compounds

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **199**
Diversion Id's: **005**
Status: **Accepted**
Submit Date: **2003−01−29 15:23:33**

Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A − Microbiolgical **B** − Inorganic Compounds **B1** − Eutrophication − Phosphorous
B2 − Sedimentation **B*** − Nitrates **C** − Synthetic Organic Compounds
C* − Pesticides **D** − Volatile Organic Compounds

Potential Contaminants Listing

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **199**

Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
7538	Auto Truck Repair Service	Inorganics, VOCs	B
"	"	"	D
5541	Gasoline Service Station	Inorganics, VOCs	B
"	"	"	D
7992	Golf Course	Fertilizers and pesticides	A
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
4212	Local Trucking, without Storage	VOCs	D
3993	Signs and Advertising Display Manufacturing	inorganics, VOCs	B
"	"	"	D
1521	Single−family Housing Construction	Oil, Paint, Pesticides, Fertilizers	A
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	B
"	"	"	D
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	A
"	"	"	B
4221	Farm Product Warehousing and Storage	TSS, VOCs	B
"	"	"	D
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
4953	Refuse Systems	ALL	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C
"	"	"	C*
"	"	"	D
7699	Repair Services, Nec	inorganics	B

Public Water Supply:	**OSBORNE, CITY OF**
Assessment Area:	**199**
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Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **199**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7538	Auto Truck Repair Service	Inorganics, VOCs	Discharge to POTW. Manage oil products and used oil so that it is not in contact with water	40 CFR 442 and
5541	Gasoline Service Station	Inorganics, VOCs	Maintain area to minimize fuel contamination	NA
7992	Golf Course	Fertilizers and pesticides	Proper application of fertilizers and pesticides. Proper cleaning of equipment and disposal of chemicals.	KDHE, KAR 28−16
4212	Local Trucking, without Storage	VOCs	Discharge to a POTW	State or federal Storm water pollution prevention regulations
3993	Signs and Advertising Display Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 459 and State or federal Storm water pollution prevention regulations
1521	Single−family Housing Construction	Oil, Paint, Pesticides, Fertilizers	Proper cleaning and disposal of household hazardous waste. Proper storage, application, and clean up of pesticides and fertilizers	KAR 28−48, KDHE, KDEM

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	Discharge to POTW. Recycle where appropriate. Properly maintain oil product and waste. Manage paint and solvent wastes properly	NA
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	Discharge to POT	NA
4221	Farm Product Warehousing and Storage	TSS, VOCs	Keep the area clean of grain. Use grease traps.	State or federal Storm water pollution prevention regulations
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
4953	Refuse Systems	ALL	Store wastes properly in order to minimize contact with storm water.	Maintain the lagoon or storage vessel properly. Control storm water run on and runoff to minimize contamination of storm water
7699	Repair Services, Nec	inorganics	Discharge to POTW	NA

Public Water Supply:	**OSBORNE, CITY OF**
Assessment Area:	**199**
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Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **199**

Ground Water Single Well Analysis

A − Microbiolgical **B** − Inorganic Compounds
B* − Nitrates **C** − Synthetic Organic Compounds
C* − Pesticides **D** − Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is the well under the influence of surface water?	No	0	0	0	0	0	0
2	Does the well meet KS water well construction standards?	Yes	0	0	0	0	0	0
3	Is the depth of the well less than 30 feet?	No	0	0	0	0	0	0
4	Are there unplugged, abandoned water wells present in Zone A?	No	0	0	0	0	0	0
5	Is there gravel pack within 20 feet of the surface?	No	0	0	0	0	0	0
6	Does a PWS own or control Zone A?	Yes	0	0	0	0	0	0
7	Does Zone A consist entirely of native grass?	No	1	1	1	1	1	1
8	Is there a contaminated well in the Zone A?	No	0	0	0	0	0	0
9	Is a class V UIC well present?	No	0	0	0	0	0	0
10	Are any commercial, industrial, or urban areas present in Zone B?	Yes	1	1	1	1	1	1
11	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
12	Are any non−farm home sites present in Zone B?	Yes	1	0	1	0	1	0
13	Do all the non−farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
14	Are any farmsteads present in Zone B?	No	0	0	0	0	0	0
15	Do all farmsteads have a water quality protection plan?	Yes	0	0	0	0	0	0
16	Does Zone B consist entirely of native grass?	No	1	1	1	1	1	1
17	Is there grazing livestock in Zone B?	No	0	0	0	0	0	0

No.	Question	Response	A	B	B*	C	C*	D
18	Do all the livestock producers have water quality protection measures in place?	Yes	0	0	0	0	0	0
19	Is there livestock confinement in Zone B?	No	0	0	0	0	0	0
20	Is each confined animal feeding operation registered with KDHE?	Yes	0	0	0	0	0	0
21	Is there corn or grain sorghum production in Zone B?	Yes	0	0	1	0	1	0
22	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
23	Are any orchards present in Zone B?	No	0	0	0	0	0	0
24	Are orchard nutrient and pesticide plans in use for each site?	Yes	0	0	0	0	0	0
25	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	No	0	0	0	0	0	0
26	Is there a railroad or major highway in Zone B or C?	Yes	0	1	1	1	1	1
27	Is there oil production in Zone B or C?	Yes	0	1	0	1	0	1
28	Do coarse textured soils predominate Zones A, B and C?	Yes	1	1	1	1	1	1
29	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
30	Is a wastewater treatment facility in Zone B or C?	Yes	1	1	1	1	1	1
31	Is a solid waste landfill in Zone B or C?	No	0	0	0	0	0	0
32	Are there unplugged, abandoned water wells present in Zone B or C?	Yes	1	0	0	0	0	0
33	Are any commercial, industrial, or urban areas present in Zone C?	Yes	1	1	1	1	1	1
34	Are water quality protection plans in use for each site/area?	No	1	1	1	1	1	1
35	Is there livestock confinement in Zone C?	No	0	0	0	0	0	0
36	Is each confined livestock facility registered with KDHE?	Yes	0	0	0	0	0	0
37	Do all the livestock producers have water quality protection measures in place?	Yes	0	0	0	0	0	0
38	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
39	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
40	Does a perennial stream flow into Zone C?	Yes	1	1	1	1	1	1
41	Are watershed water quality protection plans in place?	No	1	1	1	1	1	1

Public Water Supply:	**OSBORNE, CITY OF**
Assessment Area:	**199**
Diversion Id's:	**005**
Status:	**Accepted**
Submit Date:	**2003−01−29 15:23:33**

Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **199**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Did Not Receive Any Comments

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Kdot, Osborne	3001744	The site is closed from a 1990 gasoline spill. Groundwater contamination is unknown.	Nicole Fisher
Osborne Co Mem Hospital	3000524	The site is closed from a diesel spill in 1990. Groundwater contamination is unknown.	Nicole Fisher

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **199**
Diversion Id's: **005**
Status: **Accepted**
Submit Date: **2003−01−29 15:23:33**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **199**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
cropland	9001174	This site could contaminate the public water supply.	Nicole Fisher
cropland	9001175	This site could contaminate the public water supply.	Nicole Fisher
grove of trees	9001176	This is an important buffer to prevent contamination into the public water supply.	Nicole Fisher

Public Water Supply:	**OSBORNE, CITY OF**
Assessment Area:	**199**
Diversion Id's:	**005**
Status:	**Accepted**
Submit Date:	**2003−01−29 15:23:33**

Analysis Question Comments:

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Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **199**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		

Public Water Supply:	**OSBORNE, CITY OF**
Assessment Area:	**200**
Diversion Id's:	**999**
Status:	**Accepted**
Submit Date:	**2003−01−29 15:30:44**

Executive Summary:

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To determine the assessment area's susceptibility to contamination, a qualitative (semi−quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **200**

Susceptibility Likelihood Scores for Assessment Area

	A	B	B1	B2	C	C*	D
Susceptibility Likelihood Score − SLS	**46**	**45**	**63**	**67**	**44**	**48**	**47**
SLS Range	**Low**	**Low**	**Mid**	**Mid**	**Low**	**Low**	**Low**

A − Microbiolgical
B2 − Sedimentation
C* − Pesticides
B − Inorganic Compounds
C − Synthetic Organic Compounds
D − Volatile Organic Compounds
B1 − Eutrophication − Phosphorous

Susceptibility Likelihood Range

SLS Range	
0−50	**Low Susceptibility**
51−80	**Moderate Susceptibility**
81−100	**High Susceptibility**

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **200**
Diversion Id's: **999**
Status: **Accepted**
Submit Date: **2003−01−29 15:30:44**

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The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a100−foot radius around a groundwater well and a 1000−foot radius around a surface water intake. Zone B is a 2000−foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2−mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **200**

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
210072	Veterinary Services, Specialties	742	B
210073	Veterinary Services, Specialties	742	B
210134	Veterinary Services, Specialties	742	B
210135	Veterinary Services, Specialties	742	B
210198	Single−family Housing Construction	1521	B
210195	Highway and Street Construction	1611	B
210137	Newspapers Publishing and Printing	2711	B
208041	Farm Product Warehousing and Storage	4221	B
199456	Farm and Garden Machinery	5083	B
210186	Farm and Garden Machinery	5083	B
210210	Farm and Garden Machinery	5083	B
210211	Scrap and Waste Materials	5093	B
208042	Gasoline Service Station	5541	B
210553	Sporting and Recreational Camps	7032	B
210221	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	B
210202	Auto Truck Repair Service	7538	B
210212	Auto Truck Repair Service	7538	B

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
208056	General Farm, Primarily Crop	191	C
210216	General Farm, Primarily Crop	191	C
209621	Cattle Farm	211	C
209638	Oil and Gas Field services	1389	C
210158	Oil and Gas Field services	1389	C
210230	Single−family Housing Construction	1521	C
210225	Travel trailers and Campers Manufacturing	3792	C
209617	Scrap and Waste Materials	5093	C
209620	Scrap and Waste Materials	5093	C
199325	Gasoline Service Station	5541	C
210223	Sporting and Recreational Camps	7032	C
210067	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
210177	Auto Truck Repair Service	7538	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2000428	Mans, Richard	A−SOOB−BA10	B
2000718	La Rosh, Jhan	A−SOOB−M003	B
2000750	Roach Brothers	A−SOOB−SA04	B

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2000989	Kriley, Robert	A−SORO−S003	B
2001110	Stamper Kent	A−SORO−BA03	B
2001114	Henke, Randy	A−SOOB−B003	B
2001123	Carswell, Deryl	A−SOOB−S007	B
2001201	Holling, Ronald	A−SOOB−S004	B
2002319	Mcreynold's Farms	A−SOOB−BA09	B
2000510	Hrabe Jersey Farm	A−SORO−MA05	C
2000896	Stamper, Larry	A−SORO−BA04	C
2001234	Ochampaugh Dairy	A−SORO−M006	C
2001461	B M Mongeau Farms L.l.c. (site #2)	A−SORO−BA02	C
2002100	Carswell, Darwin	A−SOOB−B006	C
2002456	Solomon Valley Swine	A−SOOB−S001	C
2002847	Rooks County Feeders	A−SORO−C001	C

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3000031	Midway Coop, Alton	00148	B

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3000187	Comfort Motel Serv Station	02169	B
3000188	Shorty's Standard	02177	B
3000238	Farmers Union Merc Shipping	02887	B
3000335	B B Redi Mix	04107	B
3000795	Rooks Co Hwy Dept	07895	B
3000821	Stockton Power Plant	08544	B
3001749	Kdot, Stockton	26685	B
3002139	Webster Irrigation Dist.,alton	28770	B
3002277	Usd 392, Alton/osborne Jr High	29445	B
3002513	Colburn Oil Co	80253	B
3002514	Stockton Correctional Facility	80254	B
3002515	Stockton Monument	80255	B
3000236	Cadoret Oil Co.	02856	C
3001115	Knob Trenching	16780	C
3001509	Megaffin, Scott	25690	C
3001744	Kdot, Osborne	26676	C
3001879	Bedker Ranch	27324	C
3002129	Stockton, City Of	28737	C
3002800	Woodston School (abandoned)	81556	C
3002821	Hrabe Farms	81614	C

Regulated Identified Contaminated Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
7000917	ALTON PWS WELL #1	C607170241	B

Regulated Solid Waste Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
5000111	Rooks County	0138−S	B

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6000206	TURNBULL OIL INC.	I−SA14−PO02	B
6001778	ALTON MWTP	M−SO02−NO01	B
6001818	STOCKTON MWTP	M−SO41−OO01	B
6001819	STOCKTON MWTP	M−SO41−OO01	B
6001821	WOODSTON MWTP	M−SO43−NO01	B
6000907	STOCKTON INDUSTRIAL PARK	I−SO41−NO02	C

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Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **OSBORNE, CITY OF**
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Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9000851	Grove of trees	0	B
9000855	Grove of trees	0	B
9001176	grove of trees	0	B
9000853	fuel, pesticide, and fertilizer storage	10038	B
9001188	Residence	10052	B
9001232	rural housing development	10066	B
9001644	pastureland	10087	B
9000854	wheat field	111	B
9001174	cropland	111	B
9000852	cropland	115	B
9001175	cropland	115	B
9001643	cropland	115	B
9001645	cropland	115	B
9001190	oil wells	1381	B
9001194	unknown	1381	B
9001195	Salt water tanks	1381	B
9001191	Gas Booster Station	1389	B
9001193	High Pressure Gas Pipeline	1389	B
9001021	Feedlot/Phase 1	211	B
9001029	Feedlot	211	B

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9001186	Livestock Feedlot	211	B
9001187	Livestock Feedlot	211	B
9001192	Livestock Feedlot and Salvage Yard	212	B
9001189	Fertilizer Plant	2875	B
9001267	recreational area	7033	B
9001233	cropland	115	C

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Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number or sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **200**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Sedimentation	Pesticides	IOC's	SOC's	VOC's	E − P
7	6	3	25	5	10	5

A − Microbiolgical
B2 − Sedimentation
C* − Pesticides
B − Inorganic Compounds
C − Synthetic Organic Compounds
D − Volatile Organic Compounds
B1 − Eutrophication − Phosphorous

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Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A − Microbiolgical **B** − Inorganic Compounds **B1** − Eutrophication − Phosphorous
B2 − Sedimentation **B*** − Nitrates **C** − Synthetic Organic Compounds
C* − Pesticides **D** − Volatile Organic Compounds

Potential Contaminants Listing

Public Water Supply: **OSBORNE, CITY OF**
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Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
7538	Auto Truck Repair Service	Inorganics, VOCs	B
"	"	"	D
211	Cattle Farm	Sanitary, Fertilizers TSS, pesticides, Erosion and sedimentation	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
5541	Gasoline Service Station	Inorganics, VOCs	B
"	"	"	D
1611	Highway and Street Construction	Sedimentation	B2
1389	Oil and Gas Field services	Oil, Salt Water	B
"	"	"	C
5093	Scrap and Waste Materials	Metals, TSS	B
1521	Single−family Housing Construction	Oil, Paint, Pesticides, Fertilizers	A
"	"	"	B1
"	"	"	B2

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
1521	Single−family Housing Construction	Oil, Paint, Pesticides, Fertilizers	B*
"	"	"	C
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	B
"	"	"	D
3792	Travel trailers and Campers Manufacturing	inorganics, VOCs	B
"	"	"	D
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	A
"	"	"	B
4221	Farm Product Warehousing and Storage	TSS, VOCs	B
"	"	"	D
5083	Farm and Garden Machinery	inorganics	B
191	General Farm, Primarily Crop	fertilizers, Pesticides	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D

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Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **200**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7538	Auto Truck Repair Service	Inorganics, VOCs	Discharge to POTW. Manage oil products and used oil so that it is not in contact with water	40 CFR 442 and
211	Cattle Farm	Sanitary, Fertilizers TSS, pesticides, Erosion and sedimentation	Proper application of fertilizers and pesticides. Proper cleaning of equipment and disposal of chemicals. Maintain riparian areas along waterways and keep cattle out of these areas. Proper Waste Management and Grazing Management.	KDHE−Livestock Waste Management Section, KAR 28−16, KDA, County Soil Conservation District, NRCS
5541	Gasoline Service Station	Inorganics, VOCs	Maintain area to minimize fuel contamination	NA
1611	Highway and Street Construction	Sedimentation	Erosion and Sediment Control	KAR 28−16, KDHE
1389	Oil and Gas Field services	Oil, Salt Water	Proper management of production wastes	KAR 28−41, 45, 40 CFR 435
5093	Scrap and Waste Materials	Metals, TSS	Minimize contact with storm water	State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
1521	Single−family Housing Construction	Oil, Paint, Pesticides, Fertilizers	Proper cleaning and disposal of household hazardous waste. Proper storage, application, and clean up of pesticides and fertilizers	KAR 28−48, KDHE, KDEM
7032	Sporting and Recreational Camps	sanitary, fertilizers, pesticides	Discharge to POTW. Minimize use of lawn chemicals	KAR 28−5
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	Discharge to POTW. Recycle where appropriate. Properly maintain oil product and waste. Manage paint and solvent wastes properly	NA
3792	Travel trailers and Campers Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	Discharge to POT	NA
4221	Farm Product Warehousing and Storage	TSS, VOCs	Keep the area clean of grain. Use grease traps.	State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
5083	Farm and Garden Machinery	inorganics	Discharge to POTW	NA
191	General Farm, Primarily Crop	fertilizers, Pesticides	Maintain good erosion control practices and minimize the use of chemicals	NA
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations

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Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **OSBORNE, CITY OF**
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Surface Water Single Well Analysis

A − Microbiolgical **B** − Inorganic Compounds **B1** − Eutrophication − Phosphorous
B2 − Sedimentation **C** − Synthetic Organic Compounds
C* − Pesticides **D** − Volatile Organic Compounds

No.	Question	Response	A	B	B1	B2	C	C*	D
1	Is the intake located at a treatment plant?	Yes	0	0	0	0	0	0	0
2	Is there an open channel conveyance from the intake to the treatment plant?	No	0	0	0	0	0	0	0
3	Does a PWS own or control the conveyance right−of−way?	No	1	1	0	0	1	1	1
4	Does a PWS own or control the area within 1/4 mile of intake?	Yes	0	0	0	0	0	0	0
5	Is the area within 1/4 mile of the intake entirely native grass?	No	1	1	0	0	1	1	1
6	Is transportation infrastucture in close proximity to the intake?	No	0	0	0	0	0	0	0
7	Are there water quality protection plans for the transportation infrastucture?	Yes	0	0	0	0	0	0	0
8	Are any commercial, industrial, or urban areas present?	No	0	0	0	0	0	0	0
9	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0	0
10	Is riparian area vegetated?	No	1	1	0	0	0	1	0
11	Has riparian area been farmed up to the stream/riverbank?	Yes	0	0	0	0	0	1	0
12	Is there a lack of native grass or trees?	No	0	0	0	0	0	1	0
13	Is livestock use present in riparian area?	No	0	0	0	0	0	0	0
14	Are any confined livestock production sites in riparian area?	No	0	0	0	0	0	0	0
15	Is each confinement area registered with KDHE?	Yes	0	0	0	0	0	0	0
16	Are any row crops (corn, milo, soybean) present?	Yes	0	0	0	0	0	1	0
17	Are water quality protection plans in use for each cropland?	No	0	0	0	0	0	1	1

No.	Question	Response	A	B	B1	B2	C	C*	D
18	Are any orchards present?	No	0	0	0	0	0	0	0
19	Are water quality protection plans in use for each orchard?	Yes	0	0	0	0	0	0	0
20	Is the intake a river intake?	Yes	1	1	0	1	1	1	1
21	Is the intake at a city−owned lake?	No	1	1	1	1	1	1	1
22	Is there water quality monitoring conducted at the river or lake?	Yes	0	0	0	0	0	0	0
23	Is TMDL needed for any of the rivers or lakes?	Yes	1	1	1	1	1	1	1
24	Are TMDL pollutants of concern reported by monitoring?	Yes	0	0	0	0	0	0	0
25	Are any point source discharges within 16 miles upstream of intake?	Yes	1	1	1	1	1	0	1
26	Is pretreatment required at any of the point sources?	Yes	1	1	1	1	1	0	1
27	Are all riparian buffers vegetated?	Yes	0	0	0	0	0	0	0
28	Are vegetated riparian buffer and a water quality protection plans in place?	No	1	1	1	1	0	1	0
29	Is there urbanized land within riparian buffer?	No	0	0	0	0	0	0	0
30	Is a NPDES stormwater permit required for the urbanized areas?	No	1	1	1	1	1	1	1
31	Are voluntary water quality protection plans in place for each urbanized area?	Yes	0	0	0	0	0	0	0
32	Is there industrial land use within riparian buffer?	No	0	0	0	0	0	0	0
33	Is NPDES stormwater permit required for industrial areas?	No	1	1	1	1	1	1	1
34	Are voluntary water quality protection plans in place for each industrial area?	Yes	0	0	0	0	0	0	0
35	Are there livestock present?	Yes	1	0	1	0	0	1	0
36	Is there livestock confinement present?	Yes	1	0	1	0	0	1	0
37	Is each confined livestock facility registered with KDHE?	Yes	0	0	0	0	0	0	0
38	Are any row crops (corn, milo, soybeans) present?	Yes	0	0	1	1	0	1	0
39	Are water quality protection plans in use for each row crop production?	No	0	0	1	1	0	1	0
40	Are any orchards present?	No	0	0	0	0	0	0	0
41	Are water quality protection plans in use for each orchard?	Yes	0	0	0	0	0	0	0
42	Is there any small grain (wheat, oats, barley) production?	Yes	0	0	1	1	0	1	0
43	Are water quality protection plans in use for each small grain production?	No	0	0	1	1	0	1	0
44	Are there unsewered developments (contentrations of lagoons or septic systems) present in Zone B?	No	0	0	0	0	0	0	0
45	Is a general watershed water quality protection plan in use?	No	1	1	1	1	1	1	1
46	Are any point source discharges within 16 miles upstream of intake?	Yes	0	0	0	0	0	0	0
47	Is pretreatment required at any of the point sources?	Yes	1	1	1	1	1	0	1

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Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **200**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Carswell, Darwin	2002100	This cattle livestock facility has no water quality protection plans.	Nicole Fisher
Carswell, Deryl	2001123	This swine facility has no groundwater monitoring.	Nicole Fisher
Henke, Randy	2001114	This cattle livestock facility has no water quality protection plans.	Nicole Fisher
Holling, Ronald	2001201	This swine facility has no groundwater monitoring.	Nicole Fisher
Kriley, Robert	2000989	This swine facility has no groundwater monitoring.	Nicole Fisher
La Rosh, Jhan	2000718	This dairy facility has no groundwater monitoring requirements.	Nicole Fisher

Comments for Regulated Confined Animal Feeding Operations Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Mans, Richard	2000428	This cattle livestock facility has no water quality protection plans.	Nicole Fisher
Mcreynold's Farms	2002319	This cattle livestock facility has no water quality protection plans.	Nicole Fisher
Roach Brothers	2000750	This swine facility has no groundwater monitoring.	Nicole Fisher
Stamper Kent	2001110	This cattle livestock facility has no water quality protection plans.	Nicole Fisher

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Kdot, Osborne	3001744	The site is closed from a 1990 gasoline spill. Groundwater contamination is unknown.	Nicole Fisher
Midway Coop, Alton	3000031	The site is closed from a leak in 1989. The tank was removed; no groundwater contamination was suspected.	Nicole Fisher

Comments for Regulated Identified Contaminated Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
ALTON PWS WELL #1	7000917	This site had high levels of nitrate following the 1993 flood. For more information please contact Stephanie Schauer (785) 291−3066	Nicole Fisher

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
ALTON MWTP	6001778	This facility uses non−discharging lagoons.	Nicole Fisher
STOCKTON INDUSTRIAL PARK	6000907	This facility uses nondischarging lagoons.	Nicole Fisher
WOODSTON MWTP	6001821	This facility uses nondischarging lagoons.	Nicole Fisher

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Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **200**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Feedlot	9001029	200 head feedlot in close proximity to both the Solomon River and Stockton Well Heads.	Dan Sarian
Feedlot/Phase 1	9001021	Feedlot is in close proximity to both the Solomon River and Stockton and Plainville's wellheads.	Dan Sarian
Feedlot/Phase 1	9001021	Feedlot is in close proximity to both the Solomon River and Stockton and Plainville's wellheads.	Dan Sarian
Feedlot/Phase 1	9001021	Please remove this potential contamination source. I added this one by mistake.	Dan Sarian
Fertilizer Plant	9001189	Potential contamination from fertilizer operations.	Dan Sarian
Gas Booster Station	9001191	Potential for Gas Leak	Dan Sarian
Grove of trees	9000851	This site is an important buffer which protects the well from possible contamination.	Nicole Fisher
Grove of trees	9000855	This site is an important buffer to prevent possible contamination into the public water supply.	Nicole Fisher
High Pressure Gas Pipeline	9001193	This pipeline runs north south right through our well field.	Dan Sarian
Livestock Feedlot	9001186	Feedlot operation exists at this location. Number of head is unknown.	Dan Sarian

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Livestock Feedlot	9001187	A feedlot exists at this location. Number of head is unknown.	Dan Sarian
Livestock Feedlot and Salvage Yard	9001192	Potential of animal waste runoff and potential contaminates from junk located on property.	Dan Sarian
Residence	9001188	Mr. Bigge has accumulated a large amount of old cars, salvage materials and junk. It's difficult to know what potential contami	Dan Sarian
Salt water tanks	9001195	Potential contamination from salt water tank batteries.	Dan Sarian
cropland	9000852	This site could possibly contaminate the public water supply.	Nicole Fisher
cropland	9001174	This site could contaminate the public water supply.	Nicole Fisher
cropland	9001175	This site could contaminate the public water supply.	Nicole Fisher
cropland	9001233	This site could contaminate the public water supply.	Nicole Fisher
cropland	9001643	This site could contaminate the public water supply.	Nicole Fisher
cropland	9001645	This site could contaminate the public water supply.	Nicole Fisher
fuel, pesticide, and fertilizer storage	9000853	This site could possibly contaminate the public water supply.	Nicole Fisher
grove of trees	9001176	This is an important buffer to prevent contamination into the public water supply.	Nicole Fisher

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
oil wells	9001190	Oil contamination	Dan Sarian
pastureland	9001644	This site could contaminate the public water supply.	Nicole Fisher
recreational area	9001267	This site could contaminate the public water supply.	Nicole Fisher
rural housing development	9001232	This site could contaminate the public water supply.	Nicole Fisher
unknown	9001194	Potential contamination from old salt water tank batteries.	Dan Sarian
wheat field	9000854	This site could possibly contaminate the public water supply.	Nicole Fisher

Public Water Supply:	**OSBORNE, CITY OF**
Assessment Area:	**200**
Diversion Id's:	**999**
Status:	**Accepted**
Submit Date:	**2003−01−29 15:30:44**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **OSBORNE, CITY OF**
Assessment Area: **200**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		